

SOVIET RADIOCHEMISTRY**Volume 7, 1965**

(A translation of Radiokhimiya)

A

Abdel Gavad Saed, - 30, 143, 146
Akulov, G. P. - 627
Ampelogova, N. I. - 194, 197, 667
Andreev, P. F. - 82
Andreeva, I. V. - 82
Anikin, V. S. - 122
Aron, P. M. - 94
Artyukhin, P. I. - 355
Avdonina, E. N. - 217
Avvakumov, E. G. - 1, 105

B

Balashov, V. L. - 238
Balashova, N. A. - 742
Barakat, M. F. - 359
Baranovskii, I. B. - 217
Batsanov, S. S. - 588
Beloslyudova, G. A. - 729
Belov, S. V. - 122
Berdnikov, A. I. - 494
Berdonosov, S. S. - 119
Berdonosova, D. G. - 379
Bochkarev, V. A. - 459
Bogatyrev, V. L. - 723
Borak, I. - 623, 625
Brezhneva, N. E. - 343
Bulyanitsa, L. S. - 101
Burlakova, E. V. - 379
Buslaeva, M. N. - 113
Butomo, S. V. - 363

C

Chaikhorskii, A. A. - 570
Chuburkov, Yu. T. - 419, 452
Chudinov, E. G. - 187
Chukhlantsev, V. G. - 747

D

Dakar, G. M. - 24
Davydov, Yu. P. - 190
Deberdeeva, R. Yu. - 269
Dedov, V. B. - 452

Degtyarev, Yu. N. - 729, 733
Dement'ev, V. S. - 706
Drozhzhin, V. M. - 375
Dubasov, Yu. V. - 212
Dunaeva, K. M. - 78
D'yachkova, R. A. - 255, 260
Dzantiev, B. G. - 366, 369, 371
Dziomko, V. M. - 491

E

Efimova, E. I. - 611
Efimovama, E. I. - 602
Egorov, Yu. V. - 272, 388, 401
Ermakov, V. A. - 452
Ezhova, M. P. - 621

F

Fedorov, V. S. - 424
Filipov, E. A. - 352
Filippov, A. P. - 205
Filippov, V. K. - 448
Firsova, L. P. - 359
Fomicheva, V. I. - 726
Fomin, V. V. - 13, 32, 224
Frid, A. S. - 496

G

Gedeonov, L. I. - 250
Gélétseanu, I. - 279
Gel'man, A. D. - 48, 58
Gil'bert, E. N. - 355
Glazov, V. M. - 473
Glazunov, V. V. - 700
Glukhova, L. P. - 373
Goncharenko, G. I. - 352
Goncharov, I. V. - 577, 583
Grachev, S. A. - 629, 744
Gracheva, L. N. - 239, 744
Grebenshchikova, V. I. - 190
Grigor'ev, V. A. - 248
Gurikov, Yu. V. - 154
Gusel'nikov, V. S. - 737
Gusev, Yu. K. - 629, 677, 737
Gvozdev, B. A. - 419, 452

I

Il'inskaya, T. A. - 719
Iofa, B. Z. - 24, 635
Ippolitova, E. A. - 78
Ivanchenko, A. F. - 282

K

Kanevskii, E. A. - 205, 577, 583
Kashirina, F. D. - 149
Kazankin, Yu. N. - 287
Kazarinov, V. E. - 740, 742
Khalkin, V. A. - 116
Khanonkind, M. A. - 499
Khlebnikov, V. P. - 255, 260
Khrustalev, B. N. - 388, 401
Khvorostin, Ya. S. - 228
Kirkintsev, A. N. - 1, 105, 483
Kirin, I. S. - 282, 627, 629, 737
Kiselev, B. P. - 238
Kiseleva, N. N. - 366
Kletenik, Yu. B. - 109
Klokman, V. R. - 161, 486
Korobkov, V. I. - 130, 347
Kostochkin, O. I. - 94
Kovaleva, T. V. - 137
Koval'skaya, M. P. - 6
Kovarskii, A. P. - 357
Kovba, L. M. - 78, 314
Kozlova, M. D. - 430, 436, 532, 672
Krashnoshchekova, R. Ya. - 463
Krasnov, N. S. - 149
Krestov, G. A. - 69, 304, 309
Kremenskaya, I. N. - 491
Krisyuk, I. T. - 690
Krylov, L. I. - 297
Kuleshov, I. M. - 1
Kurchatova, L. N. - 333, 469
Kuzin, V. I. - 719
Kuz'micheva, E. U. - 78
Kuznetsov, B. S. - 194, 197
Kuznetsov, N. P. - 677, 737
Kuznetsova, Z. M. - 588

L

Lapin, V. A. - 309
 Lapitskii, A. V. - 30, 119, 143, 146, 235, 279
 Laskorin, B. N. - 352
 Lazarev, K. F. - 375
 Lazarev, L. N. - 45, 154, 228
 Lebedev, N. A. - 116, 452, 631
 Leonov, V. V. - 627
 Levchenko, A. V. - 201, 239
 Levin, M. S. - 109
 Levin, V. I. - 333, 343, 430, 436, 469, 532, 672
 Levina, M. E. - 476, 479
 Lipovskii, A. A. - 509, 562
 Luk'yanov, V. B. - 347
 Lyubimov, A. S. - 388
 Lyubtsev, R. I. - 406, 574, 618

M

Makarova, T. P. - 663, 669
 Makashev, Yu. A. - 282
 Makovetskii, K. L. - 363
 Malinin, A. B. - 672
 Mal'tseva, N. S. - 89, 338
 Mefod'eva, M. P. - 411
 Mekhedov, V. N. - 338
 Melikhov, I. E. - 379
 Melikhov, L. L. - 318
 Mikhailov, B. A. - 570
 Molchanova, I. V. - 685
 Morozov, L. N. - 469
 Mosevich, A. N. - 677, 737
 Moskvin, A. I. - 411
 Mudra, K. - 242
 Murin, A. N. - 627, 629

N

Naumova, I. I. - 503
 Nefedov, V. D. - 201, 239, 623, 625, 627, 629, 744
 Nemodruk, A. A. - 269, 373
 Nesmeyanov, An. N. - 217, 359
 Nikitina, S. A. - 509, 562
 Nikolaev, A. V. - 248
 Nikolaev, D. S. - 375, 602, 611
 Nikolaev, V. M. - 272
 Nikolotova, Z. I. - 515
 Nikol'skii, B. P. - 297, 406, 570, 574, 618

O

Opalovskii, A. A. - 588
 Oreshko, V. F. - 494

P

Palei, P. N. - 269, 373
 Panek, K. - 242
 Pankov, A. M. - 292, 357
 Paramonova, V. I. - 553
 Petrov, K. A. - 515
 Petrov, L. N. - 744
 Petrzhak, K. A. - 94
 Platunova, N. B. - 553
 Polyakov, V. P. - 322, 327
 Portyanoi, V. A. - 318
 Pospelov, A. A. - 747
 Posvol'skii, M. V. - 297, 406, 574, 618
 Potapova, S. A. - 13
 Prokhorov, V. M. - 463, 496
 Pronin, V. A. - 355
 Pushkarev, V. V. - 401
 Pushlenkov, M. F. - 424

R

Ratnikova, M. G. - 343
 Razbitnoi, V. M. - 452
 Reikhsfel'd, V. O. - 363
 Rengevich, V. B. - 577, 583
 Rodionov, Yu. I. - 161
 Rogozina, É. M. - 82
 Roslyakov, V. S. - 621
 Rovinskii, F. Ya. - 396
 Rozen, A. M. - 515
 Rudenko, N. P. - 30, 143, 146, 491
 Rudenko, T. I. - 32
 Ryazanov, M. A. - 39, 137, 442, 544
 Rybakov, V. N. - 89
 Rys'ev, O. A. - 250

S

Saikov, Yu. P. - 629
 Samoilov, O. Ya. - 113
 Shao P'in-hsi - 235
 Sharygin, L. M. - 747
 Sheka, Z. A. - 595
 Shershev, B. S. - 476, 479
 Shestakova, I. A. - 168, 176
 Shirvinskii, E. V. - 45, 154
 Shishkov, A. V. - 366
 Shoroshev, Yu. G. - 322, 327
 Shpakov, V. I. - 94, 690
 Shvedchikov, A. P. - 369, 371
 Shvetsov, I. K. - 187
 Shuvalov, O. N. - 263
 Sinitsyn, N. M. - 396
 Sinotova, E. N. - 623

Sinyavskays, É. I. - 595
 Skorovarov, D. I. - 352
 Skotnikov, A. S. - 515
 Skul'skii, I. A. - 700
 Skvortsov, N. V. - 352
 Smelov, V. S. - 713
 Smirnova, E. A. - 6
 Sokolova, S. I. - 723
 Sointsev, V. M. - 715
 Spitsyn, Vikt. I. - 255, 260
 Starik, I. E. - 194, 197, 657
 Stepanov, A. V. - 663, 699
 Strakhova, A. V. - 713
 Susorova, N. A. - 250
 Sviridova, R. A. - 537
 Syromyatnikov, N. G. - 706

T

Teterin, É. G. - 515
 Titlyanova, A. A. - 685
 Tolmachev, Yu. M. - 715, 719
 Tolstoi, N. S. - 116
 Toropova, M. A. - 201, 239
 Trofimov, A. M. - 287, 292, 357
 Trukhlyaev, P. S. - 452
 Trunov, V. K. - 314

U

Ukraintsev, E. V. - 641, 648
 Ul'yanov, V. S. - 537

V

Valov, P. M. - 355
 Vdovenko, V. M. - 6, 39, 45, 101, 137, 154, 212, 228, 442, 509, 544
 Vernov, Yu. S. - 486
 Vlasov, L. G. - 235
 Vobetsky, M. - 623, 625
 Voevodin, E. N. - 459
 Volkov, V. V. - 452
 Vorob'ev, A. M. - 726

W

Wung Hao-ming - 217

Y

Yakolev, G. N. - 452, 631
 Yakovleva, N. E. - 509, 562
 Yashkichev, V. I. - 113

Z

Zaborenko, K. B. - 130, 318, 322, 327, 476, 479

Zaitsev, V. M. - 627
Zaitseva, V. P. - 48, 58

Zhukovskaya, A. S. - 128
Zhuravlev, V. E. - 201, 239

Ziv, D. M. - 168, 176
Zolotov, Yu. A. - 633

RADIOKHIMIYA
EDITORIAL BOARD

I. P. Alimarin
A. I. Brodskii
É. K. Gerling
A. A. Grinberg
V. R. Klokman
L. V. Komlev
B. V. Kurchatov
A. N. Neameyanov
A. V. Nikolaev
B. P. Nikol'skii (Acting Editor)
S. Z. Roginskii
V. I. Spitsyn
V. M. Vdovenko (Editor-in-Chief)
A. P. Vinogradov

SOVIET
RADIOCHEMISTRY

A translation of RADIOKHIMIYA
a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N.Y.

Volume 7, Number 1

January-February, 1965

CONTENTS

	P A G E
	ENG. RUSS.
Separation Factors of Radioactive Fragment Elements in the Directed Crystallization of Sodium Nitrate—A. N. Kirgintsev, E. G. Avvakumov, and I. M. Kuleshov	1 3
Extraction of Uranium from HF—HNO ₃ by Solutions of Tertiary Amines in Benzene—V. M. Vdovenko, M. P. Koval'skaya, and E. A. Smirnova	6 7
Distribution of p-Dicresylphosphoric Acid between Aqueous Solutions of Nitric Acid and Certain Organic Solvents—S. A. Potapova and V. V. Fomin	13 14
Extraction of Complex Acids by Oxygen-containing Solvents. V. Investigation of the Mechanism of the Extraction of Pentavalent Antimony—G. M. Dakar and B. Z. Iofa	24 25
Extraction Separation of Thorium and Protactinium—N. P. Rudenko, Abdel Gavad Saed, and A. V. Lapitskii	30 32
Investigation of the Properties of Tributyl Phosphate Solutions in Benzene, Carbon Tetrachloride, and n-Decane. I. Heats of Mixing and Volume Change during Mixing of Anhydrous Tributyl Phosphate with Benzene, Carbon Tetrachloride, and n-Decane—V. V. Fomin and T. I. Rudenko	32 33
Activity Coefficients in Polycomponent Systems. I.—V. M. Vdovenko and M. A. Ryazanov	39 39
Study of the Thermodynamic Characteristics of the System HF—HNO ₃ —H ₂ O. I. Measurement of the Vapor Pressure of the Components of the Systems HF—H ₂ O and HF—HNO ₃ —H ₂ O—V. M. Vdovenko, L. N. Lazarev, and E. V. Shirvinskii	45 46
Production and Certain Properties of Nitric Acid Solutions of Pu(V)—A. D. Gel'man and V. P. Zaitseva	48 49
Behavior of Pu(V) in Nitric Acid Solutions—A. D. Gel'man and V. P. Zaitseva	58 56
Complete Thermodynamic Characterization of the Electrode Processes with the Participation of Rare Earth and Actinide Elements—G. A. Krestov	69 68
Interaction of Uranium Oxides of Various Compositions with Sulfuric Acid—E. U. Kuz'micheva, K. M. Dunaeva, L. M. Kovba, and E. A. Ippolitova	78 78

Annual Subscription: \$95

Single Issue: \$30

Single Article: \$15

All rights reserved. No article contained herein may be reproduced for any purpose whatsoever without permission of the publisher. Permission may be obtained from Consultants Bureau Enterprises, Inc., 227 West 17th Street, New York, N.Y. 10011, U.S.A.

CONTENTS (continued)

P A G E
ENG. | RUSS.

Processes and Products of the Reaction of High-molecular Compounds with Inorganic Salts		
V. Physicochemical Investigations of Processes of the Reaction of Polyacrolein with Inorganic Salts—I. V. Andreeva, É. M. Rogozina, and P. F. Andreev	82	83
Radiochemical Study of the Reaction ($p, p\pi^+$) on In^{115} —V. N. Rybakov and N. S. Mal'tseva	89	90
Yields of Br^{87} , Br^{88} , Br^{89} , I^{137} , I^{138} —Precursors of Delayed Neutrons in the Fission of U^{238} and Th^{232} by 14.5-MeV Neutrons—V. I. Shpakov, O. I. Kostochkin, K. A. Petrzhak, and P. M. Aron	94	96
 BRIEF COMMUNICATIONS		
Distribution of Alkali Halides between Aqueous Solutions and Organic Iodine Solutions.		
IV. Study of the Distribution of $CsCl$ between Aqueous and Organic Iodine Solutions—V. M. Vdovenko and L. S. Bulyanitsa	101	104
Ratio between the Separation Factors in Binary and Ternary Systems—A. N. Kirgintsev and E. G. Avvakumov	105	107
Interaction of Mono-2-ethylhexylphosphoric Acid with Tributyl Phosphate in n-Octane—Yu. B. Kletenik and M. S. Levin	109	110
Covalence of the Interaction of the Cation with Water Molecules and Heats of Solution of the Nitrates of Rb, Tl, Mg, Co, and Ni—M. N. Buslaeva, O. Ya. Samoilov, and V. I. Yashkichev	113	113
Microchromatographic Column with Remote Control—N. A. Lebedev, N. S. Tolstoi, and V. A. Khalkin	116	115
Bromination of Microquantities of Protactinium-233 on Carriers—A. V. Lapitskii and S. S. Berdonosov	119	118
Determination of the Number of Fissions in a Natural Mixture of Uranium during Its Irradiation by Neutrons—S. V. Belov and V. S. Anikin	122	120
Use of Ethanol in the Isolation of Sodium-22 from Cyclotron Targets—A. S. Zhukovskaya	128	125
Influence of the pH of the Impregnating Solution on the Length of the Track of an α Particle in a Nuclear Photoemulsion—K. B. Zaborenko and V. I. Korobkov	130	126
 OBITUARY		
In Memory of Konstantin Konstantinovich Aglntsev	133	129

I. P. Alimarin
A. I. Brodskii
E. K. Gerling
A. A. Grinberg
V. R. Klokman
L. V. Komlev
B. V. Kurchatov
A. N. Nesmeyanov
A. V. Nikolev
B. P. Nikol'skii (Acting Editor)
S. Z. Roginskii
V. I. Spitsyn
I. E. Starik
V. M. Vdovenko (Editor-in-Chief)
A. P. Vinogradov

SOVIET RADIOCHEMISTRY

A translation of RADIOKHIMIYA

a publication of the Academy of Sciences of the USSR

© 1965 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York 11, N.Y.

Volume 7, Number 2

March-April, 1965

CONTENTS

	P A G E
	ENG. RUSS.
Influence of the Nature of the Diluent on the Distribution Coefficients—V. M. Vdovenko, T. V. Kovaleva, and M. A. Ryazanov.....	137 133
Extraction of Thorium, Protactinium, and Uranium Using Neocupferron—A. V. Lapitskii, N. P. Rudenko, and Abdel Gavad Saed	143 139
Behavior of Thorium, Protactinium, and Uranium in Extraction with Benzhydroxamic Acid and N-Benzoylphenylhydroxylamine—N. P. Rudenko, Abdel Gavad Saed and A. V. Lapitskii	146 142
Influence of Structural Factors on the Thermodynamic Characteristics of the Extraction of Salts of Basic Dyes. VI. Composition and Structure of Solvates in Isoamyl Alcohol —N. S. Krasnov and F. D. Kashirina	149 146
Study of the Thermodynamic Characteristics of the System HF—HNO ₃ —H ₂ O. II. Calculation of the Activity of Components of the System HF—HNO ₃ —H ₂ O—V. M. Vdovenko, L. N. Lazarev, E. V. Shirbinskii, and Yu. V. Gurikov	154 151
Influence of the Diluent on the Solubility of Metallic Cadmium in Solutions of Cadmium Chloride with Chlorides of the Alkali Metals—Yu. I. Rodionov and V. R. Klokman	161 159
Investigation of the Solubility of Certain Actinium Compounds. I. Determination of the Solubility of Actinium Oxalate—D. M. Ziv and I. A. Shestakova	168 166
Investigation of the Solubility of Certain Actinium Compounds. II. Determination of the Solubility and Estimation of the Relative Basicity of Actinium Hydroxide —D. M. Ziv and I. A. Shestakova	176 175
On the Complex-Forming Ability of Pentavalent Neptunium—É. G. Chudinov and I. K. Shvetsov, State of Pu ^(IV) in the Region of pH = 1.0-12.0 at a Plutonium Concentration of 2 · 10 ⁻⁵ M —V. I. Grebenschchikova and Yu. P. Davydov	187 188
Behavior of Polonium in Ketones and Mixed Aqueous Acetone Solutions—I. E. Starik, B. S. Kuznetsov, and N. I. Ampelogova	190 191
Influence of Ketones on the Behavior of Polonium in Hydrochloric Acid Solutions—I. E. Starik, N. I. Ampelogova, and B. S. Kuznetsov	194 196
Synthesis of Some α -Naphthyl Derivatives of Polonium—V. D. Nefedov, M. A. Toropova, V. E. Zhuravlev, and A. V. Levchenko	197 199
Kinetics of the Interaction of UO ₂ and Fe ^(III) in Perchloric Acid Solutions—E. A. Kanevskii and A. P. Filippov	201 203
	205 207

Annual Subscription: \$95

Single Issue: \$30

Single Article: \$15

All rights reserved. No article contained herein may be reproduced for any purpose whatsoever without permission of the publisher. Permission may be obtained from Consultants Bureau Enterprises, Inc., 227 West 17th Street, New York City, United States of America.

CONTENTS (continued)

	P A G E	ENG. RUSS.
Physicochemical Investigation of Some Radium Compounds. I. Ionic Refraction of Radium —V. M. Vdovenko and Yu. V. Dubasov	212	214
Investigation of the Reactions of Tritium and C ¹⁴ Recoil Atoms with Heterocyclic Amines —E. N. Avdonina, I. B. Baranovskii, Wung Hao-ming and An. N. Nesmeyanov	217	220
Exchange of Cations on Vermiculite at Increased Pressure and Temperature—V. V. Fomin	224	228
Investigation of Ru(IV) Solutions in Perchloric and Sulfuric Acids—V. M. Vdovenko, L. N. Lazarev, and Ya. S. Khvorostin	228	232
 BRIEF COMMUNICATIONS		
Study of the State of Niobium in Dilute Solutions of Organic Acids—A. V. Lapitskii, Shao P'in-hsi, and L. G. Vlasov	235	241
Temperature Dependence of the Separation Factor of Strontium and Barium in Amalgam Exchange—B. P. Kiselev and V. L. Balashov	238	244
Some p-Anisyl Derivatives of Polonium—V. D. Nefedov, V. E. Zhuravlev, M. A. Toropova, L. N. Gracheva, and A. V. Levchenko	239	245
Continuous Measurement by Gas-Liquid Chromatography of Radioactivity in the Fission of Compounds Labeled by S ³⁵ —K. Panek and K. Mudra	242	246
Determination of the Surface of Tetrathiocyanatomercuroate Precipitates by An Isotopic Exchange Method—A. V. Nikolaev and V. A. Grigor'ev	248	252
Determination of Be ⁷ in Samples of Atmospheric Aerosols and in Precipitation in the Presence of Fission Fragments—L. I. Gedeonov, O. A. Rys'ev, and N. A. Susorova	250	254

RADIOKHIMIYA
EDITORIAL BOARD

I. P. Alimarin
A. I. Brodskii
É. K. Gerling
A. A. Grinberg
V. R. Klokman
L. V. Komlev
B. V. Kurchatov
A. N. Nesmeyanov
A. V. Nikolaev
B. P. Nikol'skii (Acting Editor)
S. Z. Roginskii
V. I. Spitsyn
V. M. Vdovenko (Editor-in-Chief)
A. P. Vinogradov

SOVIET
RADIOCHEMISTRY

A translation of RADIOKHIMIYA
a publication of the Academy of Sciences of the USSR

© 1966 CONSULTANTS BUREAU ENTERPRISES, INC.
227 West 17th Street, New York, N.Y. 10011

Volume 7, Number 3

May-June, 1965

CONTENTS

	P A G E
	ENG. RUSS.
Extraction of Protactinium by Tributyl Phosphate. I. Inextractible Forms of Protactinium —Vikt. I. Spitsyn, R. A. D'yachkova, and V. P. Khlebnikov	255 257
Extraction of Protactinium by Tributyl Phosphate. II. Determination of the Solvate Number of the Extractable Complex of Protactinium—R. A. D'yachkova, Vikt. I. Spitsyn, and V. P. Khlebnikov	260 262
Influence of Salting-Out Agents on the Activity Coefficients of Uranium and Plutonium in Nitric Acid Solutions—O. N. Shuvalov	263 265
Determination of Uranium in Solutions of Tributyl Phosphate in Kerosene and Synthine in the Form of the Thiocyanate—R. Yu. Deberdeeva, A. A. Nemodruk, and P. N. Palei	269 271
Radiocolloids in Sorption Systems. II. Isotherms of Collective Sorption in a System with Variable Mass of the Sorbent—Yu. V. Egorov and V. M. Nikolaev	272 273
Complex Formation of the Actinide Elements—I. Géleáseanu and A. V. Lapitskii	279 280
Citrate Complexes of Lanthanum with a 1:1 Composition—A. F. Ivanchenko, I. S. Kirin, and Yu. A. Makashev	282 283
Clathrate Compounds of p-Cresol with the Noble Gases. I. Compound of p-Cresol with Xenon —A. M. Trofimov and Yu. N. Kazankin	287 288
Influence of the Gas Macrocomponent on the Distribution of Kr ⁸⁵ and Xe ¹³³ between the Gas Phase and Solid Carbon Sorbent—A. M. Trofimov and A. M. Pankov	292 293
Partial Thermodynamic Equilibria in Nonequilibrium Systems. I. Interaction of Plutonium with Hydrogen Peroxide in the Presence of Various Ligands—B. P. Nikol'skii M. V. Posvol'skii, and L. I. Krylov	297 298
Entropy Characteristics of the Short-Range and Long-Range Hydration of Ions of the Rare Earth and Actinide Elements—G. A. Krestov	304 305
Heat Capacity and Entropy of Certain Crystalline Compounds of Francium and Astatine within the Temperature Interval 0-300°K—G. A. Krestov and V. A. Lapin	309 311
X-Ray Diffraction Study of Binary Oxides in the System UO ₂ -MoO ₂ -MoO ₃ —L. M. Kovba and V. K. Trunov	314 316

Annual Subscription: \$95

Single Issue: \$30

Single Article: \$15

All rights reserved. No article contained herein may be reproduced for any purpose whatsoever
without permission of the publisher. Permission may be obtained from Consultants Bureau, A
Division of Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011, U.S.A.

CONTENTS (continued)

P A G E
ENG. | RUS.

Complex Emanation-Thermal Method—K. B. Zaborenko, L. L. Melikhov, and V. A. Portyanoi	318	319
Use of the Complex Emanation-Thermal Method to Study Phase Diagrams in the System KCl—CaCl ₂ —K. B. Zaborenko, V. P. Polyakov, and Yu. G. Shoroshev	322	324
Use of the Complex Emanation-Thermal Method to Study Phase Diagrams in the System CaO—Fe ₂ O ₃ —K. B. Zaborenko, V. P. Polyakov, and Yu. G. Shoroshev	327	329
Evaluation of the Cross Sections of the Nuclear Reactions ⁴⁵ Sc (n, α) ⁴² K, ⁴² Ca (n, p) ⁴² K, and ⁴³ Ca (n, p) ⁴³ K. Production of K ⁴² and K ⁴³ without a Carrier—L. N. Kurchatova and V. I. Levin	333	336
Formation of At ²⁰⁵ and At ²⁰³ in the Bombardment of Bismuth by 400 MeV Protons —N. S. Mal'tseva and V. N. Mekhedov	338	341
Preparation of Samples and Correction for Self-Absorption in the Measurement of the Activity of Soft Beta Emitters—V. I. Levin, N. E. Brezhneva, and M. G. Ratnikova	343	346
Study of the Procedure for Relative Measurements of Radioactivity by Dispersion Analysis —V. B. Luk'yanov and V. I. Korobkov	347	350
BRIEF COMMUNICATIONS		
Extraction of Uranium (VI) from Carbonate Solutions by Quaternary Phosphonium and Arsonium Bases—B. N. Laskorin, E. A. Filipov, G. I. Goncharenko, N. V. Skvortsov, and D. I. Skorovarov	352	356
Extraction Isolation of Co ⁵⁷ without a Carrier from an Irradiated Target—É. N. Gil'bert, V. A. Pronin, P. I. Artyukhin, and P. M. Valov	355	358
Production and Investigation of the Stability of Kryptonates of Polymethyl Methacrylate —A. M. Trofimov, A. M. Pankov, and A. P. Kovarskii	357	359
Reaction of C ¹⁴ Recoil Atoms in Mixtures Containing α -Picoline—M. F. Barakat, L. P. Firsova, and An. N. Nesmeyanov	359	361
Synthesis of Trimethylbenzenes for the Measurement of Natural Radiocarbon by a Scintillation Method—S. V. Butomo, V. O. Reikhsfel'd, and K. L. Makovetskii	363	364
Development of Methods of Hot Synthesis of Biologically Active Substances Labelled with Sulfur-35. III. Production of Triethyleneiminothiophosphoramide with a Double Label of Sulfur-35 and Phosphorus-32—B. G. Dzantiev, N. N. Kiseleva, and A. V. Shishkov .	366	366
Formation of a Polymer Labelled with C ¹⁴ in the Irradiation of an Ethylene-Ammonia Mixture in a Nuclear Reactor—B. G. Dzantiev and A. P. Shvedchikov	369	368
Investigation of Reactions of Hot Hydrogen Atoms with Ethylene at Room Temperatures —B. G. Dzantiev and A. P. Shvedchikov	371	370
Determination of Small Amounts of U ^(VI) in the Presence of Large Quantities of U ^(IV) —A. A. Nemodruk, P. N. Palei, and L. P. Glukhova	373	372
Determination of Radium in Natural Waters without Preliminary Chemical Isolation —V. M. Drozhzhin, K. F. Lazarev, and D. S. Nikolaev	375	374

RADIOKHIMIYA
EDITORIAL BOARD

I. P. Alimarin
A. I. Brodskii
É. K. Gerling
A. A. Grinberg
V. R. Klokman
L. V. Konlev
B. V. Kurchatov
A. N. Neameyanov
A. V. Nikolaev
B. P. Nikol'skii (Assistant Editor)
S. Z. Roginskii
V. I. Spitsyn
V. M. Vdovenko (Editor-in-Chief)

SOVIET
RADIOCHEMISTRY

A translation of RADIOKHIMIYA,

a publication of the Academy of Sciences of the USSR

© 1966 CONSULTANTS BUREAU, A DIVISION OF PLENUM PUBLISHING
CORPORATION, 227 West 17th Street, New York, N. Y. 10011

Volume 7, Number 4

July-August, 1965

CONTENTS

	RUSS. PAGE	PAGE
Equilibrium Distribution of Impurities Between Solid and Liquid Phases. IV. Models for the Distribution in Ostwald Maturation—I. V. Melikhov, E. V. Burlakova, and D. G. Berdonosova	379	377
Radiocolloids in Sorption Systems. III. Effect of Hydrogen Ion Concentration—Yu. V. Egorov, A. S. Lyubimov, and B. N. Khrustalev	388	386
Sorption of Ruthenium by Natural Sorbents. Sorption of Nitrosonitrato, Nitrosochloro, and Chloro Complexes of Ruthenium-106—N. M. Sinitsyn and F. Ya. Rovinskii	396	394
Possibility of Estimating the Radius of a Solvated Ion by Measurements on the Sorption Equilibrium—V. V. Pushkarev, B. N. Khrustalev, and Yu. V. Egorov	401	400
Investigation of Complex Formation by the Dialysis Method. I. Theoretical Proof of the Possibility of Using the Dialysis Method for Studying Complex Formation Processes —B. P. Nikol'skii, M. V. Posvol'skii, and R. I. Lyubtsev	406	405
Investigation of Complex Formation of Pentavalent Neptunium in Lactate and Glycolate Solutions—A. I. Moskvin and M. P. Mefod'eva	411	410
Extraction of Curium and Fermium with Thenoyltrifluoroacetone—B. A. Gvozdev and Yu. T. Chuburkov	419	419
Kinetics of Reextraction of Uranyl Nitrate from Alkyl Phosphate Solutions Into Water. I. The System $\text{UO}_2(\text{NO}_3)_2 \cdot \text{TBP}$ —Diluent—M. F. Pushlenkov and V. S. Fedorov	424	424
Extraction of Carrier-Free Silver from Hydrochloric Acid Solutions with Tributyl Phosphate. I. Solvation of Silver and Hydrochloric Acid in the Organic Phase. Comparative Method of Studying Solvation in Extraction—M. D. Kozlova and V. I. Levin	430	430
Extraction of Carrier-Free Silver from Hydrochloric Acid Solutions with Tributyl Phosphate. II. Effect of Hydrogen Ion Concentration—V. I. Levin and M. D. Kozlova	436	437
Activity Coefficients in Multicomponent Systems. II. Value of Zdanovskii's Rule for Calculating the Thermodynamic Properties of Mixed Solutions—V. M. Vdovenko and M. A. Ryazanov	442	442
Determination of Free Energies of Formation of Compounds by the Eutonic Method —V. K. Fillipov	448	449
Preparation of ^{242}Pu and ^{242}Cm from Neutron-Irradiated ^{241}Am —V. B. Dedov, V. V. Volkov, B. A. Gvozdev, V. A. Ermakov, I. A. Lebedev, V. M. Razbitnoi, P. S. Trukhlyayev, Yu. T. Chuburkov, and G. N. Yakovlev	452	453

Annual Subscription: \$95

Single Issue: \$30

Single Article: \$15

*All rights reserved. No article contained herein may be reproduced for any purpose whatsoever
without permission of the publisher. Permission may be obtained from Consultants Bureau, A
Division of Plenum Publishing Corporation, 227 West 17th Street, New York, N. Y. 10011, U.S.A.*

CONTENTS (continued)

RUSS.
PAGE PAGE

<p>Separation of Americium and Curium by Anion Exchange Using Solutions Containing a Mixture of Methanol and Nitric Acid as the Eluent—V. A. Bochkarev and E. N. Voevodin</p> <p>Migration of Radioactive Strontium in Soil Under the Action of an Electric Field—V. M. Prokhorov and R. Ya. Krashnoshchekova</p> <p>Effective Cross Sections of the Reaction $\text{Ca}^{48}(\text{n}, 2\text{n})\text{Ca}^{47}$ for 14-15 MeV Neutrons and for Fission Neutrons—L. N. Kurchatova, V. I. Levin, and L. N. Morozov</p> <p>Use of Several Radioactive Isotopes in Radiochemical Analysis—V. M. Glazov</p>	<p>459</p> <p>463</p> <p>469</p> <p>473</p>	<p>461</p> <p>465</p> <p>472</p> <p>475</p>
BRIEF COMMUNICATIONS		
<p>Study of the System $\text{NaBeF}_3-\text{NaPO}_3$ by the Emanation Method—M. E. Levina, B. S. Shershev, and K. B. Zaborenko</p> <p>Study of the System $\text{KBeF}_3-\text{KPO}_3$ by the Emanation Method—M. E. Levina, B. S. Shershev, and K. B. Zaborenko</p> <p>Relation of the Value D to Recrystallization Time—A. N. Kirgintsev</p> <p>Relation of D to Recrystallization Time with Any Time Dependence of the Probability of Transfer of the Microcomponent from one Phase to Another—Yu. S. Vernov and V. R. Klokman</p> <p>Method of Separating ^{95}Zr from ^{95}Nb by Extraction of Zirconium as a Mixed Complex with 8-Hydroxyquinaldixime and Caproic Acid—N. P. Rudenko, V. M. Dziomko, and I. N. Kremenskaya</p> <p>Effect of Stable Cobalt on the Sorption of ^{60}Co by Peat—A. I. Berdnikov and V. F. Oreshko</p> <p>Effect of Salt Concentration of the Soil Solution on the Diffusion Rate of Microamounts of Strontium in Soil—V. M. Prokhorov and A. S. Frid</p> <p>Relation of the Shaking Effect to Atomic Weight in the Radioactive Decay of Nuclei—M. A. Khanonkind</p> <p>Quantitative Determination of Nickel and Iron in Ferromagnetic Films by Neutron Activation—I. I. Naumova</p>	<p>476</p> <p>479</p> <p>483</p> <p>486</p> <p>491</p> <p>494</p> <p>496</p> <p>499</p> <p>503</p>	<p>480</p> <p>483</p> <p>486</p> <p>488</p> <p>492</p> <p>494</p> <p>496</p> <p>498</p> <p>502</p>

RADIOKHIMIYA
EDITORIAL BOARD

I. P. Alimarin
A. I. Brodskii
E. K. Gerling
A. A. Grinberg
V. R. Klokman
L. V. Komlev
B. V. Kurchatov
A. N. Neameyev
A. V. Nikolaev
B. P. Nikol'skii (Assistant Editor)
S. Z. Roginskii
V. I. Spitsyn
V. M. Vdovenko (Editor-in-Chief)

SOVIET
RADIOCHEMISTRY

*A translation of RADIOKHIMIYA,
a publication of the Academy of Sciences of the USSR*

© 1966 CONSULTANTS BUREAU, A DIVISION OF PLENUM PUBLISHING
CORPORATION, 227 West 17th Street, New York, N. Y. 10011

Volume 7, Number 5

September-October, 1965

CONTENTS

	RUSS. PAGE	PAGE
Extraction of U(IV) and U(VI) from Hydrochloric Acid Solutions with Tri-n-butyl Phosphate—V. M. Vdovenko, A. A. Lipovskii, S. A. Nikitina, and N. E. Yakovleva	509	509
Relation of the Extraction Power of Organic Compounds to their Structure and to the Electronegativity of the Substituent Groups. II. Effect of Electronegative Groups—A. M. Rozen, Z. I. Nikolotova, K. A. Petrov, A. S. Skotnikov, and E. G. Teterin	515	517
Extraction of Carrier-Free Silver from Hydrochloric Acid Solutions by Tributyl Phosphate. III. Effect of Concentration of Chloride Ions—M. D. Kozlova and V. I. Levin	532	534
Dissociation, Dimerization, and Distribution of Dibutylphosphoric, Dihexylphosphoric, and Dioctylphosphoric Acids in the System n-Octane-0.1 M NaClO ₄ Solution-HClO ₄ .—V. S. Ul'yannov and R. A. Sviridova	537	538
Activity Coefficients in Multicomponent Systems. III. Calculation of Activity Coefficients of Uranyl Nitrate in Aqueous Solutions of Magnesium, Calcium, Strontium, and Zinc Nitrates—V. M. Vdovenko and M. A. Ryazanov	544	545
Complex Formation of the Uranyl Ion with Salicylic Acid. III. Composition and Regions of Existence of Precipitates Formed in Salicylate Solutions of Uranyl—V. I. Paramonova and N. B. Platunova	553	554
Spectroscopic Investigation of the Solvation of UCl ₄ by Molecules of Neutral Organophosphorus Compounds—A. A. Lipovskii, S. A. Nikitina, and N. E. Yakovleva	562	563
Complex Formation in Nonaqueous Solvents. VII. Distribution of Acetic Acid Between Water and Carbon Tetrachloride—A. A. Chaikhorskii, B. P. Nikol'skii, and B. A. Mikhailov	570	572
Investigation of Complex Formation by the Dialysis Method. II. Derivation of Equations for the Determination of the Equilibrium Constant of a Reaction—B. P. Nikol'skii, M. V. Posvol'skii, and R. I. Lyubtsev	574	576
Kinetics of Oxidation of U(IV) in Carbonate Solutions by Atmospheric Oxygen—E. A. Kanevskii, I. V. Goncharov, and V. B. Rengevich	577	579
Catalytic Effect of Copper Ammoniate in the Oxidation of Uranium Dioxide by Atmospheric Oxygen—E. A. Kanevskii, I. V. Goncharov, and V. B. Rengevich	583	585

Annual Subscription: \$95

Single Issue: \$30

Single Article: \$15

All rights reserved. No article contained herein may be reproduced for any purpose whatsoever without permission of the publisher. Permission may be obtained from Consultants Bureau, A Division of Plenum Publishing Corporation, 227 West 17th Street, New York, N. Y. 10011, U.S.A.

CONTENTS (continued)

	RUSS. PAGE	PAGE
Physicochemical Investigation of the Solid Phases of the System $\text{NH}_4\text{F}-\text{UO}_3-\text{H}_2\text{O}$		
-A. A. Opalovskii, S. S. Batsanov, and Z. M. Kuznetsova	588	589
Kinetic Study of Dialkyl Phosphate Complexes of Thorium and Rare Earth Elements		
-Z. A. Sheka and É. I. Sinyavskaya	595	596
Radiochemical Composition of Iron-Manganese Nodules and Manganese Ores—E. I. Efimova and D. S. Nikolaev	602	603
Forms of Radioactive Elements in Iron-Manganese Nodules—D. S. Nikolaev and E. I. Efimova	611	614
BRIEF COMMUNICATIONS		
Investigation of Complex Formation by the Dialysis Method. III. Determination of the First Hydrolysis Constant of Cadmium and Zinc Acetates—B. P. Nikol'skii, M. V. Posvol'skii, and R. I. Lyubtsev	618	623
Procedure for Electrodeposition of Small Amounts of Uranium from Solutions—V. S. Roslyakov and M. P. Ezhova	621	625
Isomeric Effects During the β-Decay of RaE in o-, m-, and p-Tolyl Derivatives of Bismuth—V. D. Nefedov, M. Vobetsky, E. N. Sinotova, and I. Borak	623	627
Synthesis of p-Xylyl Derivatives of Polonium During the β-Decay of RaE in Analogous Bismuth Derivatives—V. D. Nefedov, M. Vobetsky, and I. Borak	625	628
Formation of Fluorine-Containing Compounds of Xenon During the β-Decay of ^{131}I in Iodine Pentafluoride—A. N. Murin, V. D. Nefedov, I. S. Kirin, V. V. Leonov, V. M. Zaitsev, and G. P. Akulov	627	629
Formation of Oxygen-Containing Compounds of Xenon During the β-Decay of ^{133}I in Potassium Periodate—A. N. Murin, V. D. Nefedov, I. S. Kirin, S. A. Grachev, Yu. K. Gusev, and Yu. P. Saikov	629	631
LETTERS TO THE EDITOR		
On the Article by A. I. Moskvin, V. P. Zaitseva, and A. D. Gel'man "Investigation of Complex Formation of Trivalent Plutonium with the Anions of Acetic, Citric, and Tartaric Acids by Ion Exchange"—G. N. Yakovlev and N. A. Lebedev	631	633
Colloidal Chemical Mechanism of Extraction (Regarding the article by K. V. Troitskii)—Yu. A. Zolotov	633	634
Reply to V. V. Fomin's Letter to the Editor—B. Z. Iofa	635	636

RADIOKHIMIYA
EDITORIAL BOARD

I. P. Alimarin
A. I. Brodskii
É. K. Gerling
A. A. Grinberg
V. R. Klokman
L. V. Komlev
B. V. Kurchatov
A. N. Nesmeyanov
A. V. Nikolaev
B. P. Nikol'skii (Assistant Editor)
S. Z. Roginskii
V. I. Spitsyn
V. M. Vdovenko (Editor-in-Chief)

SOVIET
RADIOCHEMISTRY

*A translation of RADIOKHIMIYA,
a publication of the Academy of Sciences of the USSR*

© 1966 CONSULTANTS BUREAU, A DIVISION OF PLENUM PUBLISHING
CORPORATION, 227 West 17th Street, New York, N. Y. 10011

Volume 7, Number 6

November-December, 1965

CONTENTS

	RUSS. PAGE	PAGE
Mechanism of the Extraction of Thorium and Uranium by Mono- and Diisoamyl Esters of Methylphosphonic Acid—E. V. Ukrainstsev	641	641
Extraction of Zirconium by Di- and Monoisoamyl Esters of Methylphosphonic Acid —E. V. Ukrainstsev	648	648
Study of the Complex Formation of Plutonium with Chloride and Perchlorate Ions by the Method of Extraction—I. E. Starik and N. I. Ampelogova	657	658
Electromigration Investigation of the Complexation of Trivalent Plutonium with Solutions of Ethylenediaminetetraacetic Acid—A. V. Stepanov and T. P. Makarova	663	664
Use of the Electromigration Method to Study Complex Oxalates of Am ^(III) —A. V. Stepanov and T. P. Makarova	669	670
Production of Silver-111 without a Carrier—V. I. Levin, M. D. Kozlova, and A. B. Malinin	672	673
Chromatographic Separation of Certain Oxygen Compounds of Xenon and Iodine —A. N. Mosévich, N. P. Kuznetsov, and Yu. G. Gusev	677	678
On the Behavior of Trace Amounts of Yttrium and Cerium in Soil—I. V. Molchanova and A. A. Titlyanova	685	687
Calculation of the Particular and Total Yields of Fission Fragments—I. T. Krisyuk and V. I. Shpakov	690	692
Adsorption of Trace Amounts of Cesium on Teflon, Polyethylene, and Glass from Aqueous Solutions of Sodium Tetraphenylborate—I. A. Skul'skii and V. V. Glazunov	700	703
Distribution of Thorium Isotopes between Particles of Various Degrees of Disperion in Natural Water—V. S. Dement'ev and N. G. Syromyatnikov	706	710
BRIEF COMMUNICATIONS		
Extraction of Uranium by a Mixture of Trioctylamine with Diisoamylphosphoric Acid —V. S. Smedov and A. V. Strakhova	713	718
On the Thermodynamics of the Solution of U ₃ O ₈ in H ₂ SO ₄ —V. M. Solntsev and Yu. M. Tolmachev	715	719
Absorption Spectra of Uranium Oxides. I. Infrared Absorption Spectrum of U ₂ O ₅ —T. A. Il'inskaya, V. I. Kuzin, and Yu. M. Tolmachev	719	722
Solution of UO ₂ C ₂ O ₄ by Ion-Exchange Resins—V. L. Bogatyrev and S. I. Sokolova	723	725
Analytical Determination of Americium, Plutonium, and Uranium Using the Anion-Exchange Resin AMP—A. M. Vorob'ev and V. I. Fomicheva	726	728

Annual Subscription: \$95

Single Issue: \$30

Single Article: \$15

*All rights reserved. No article contained herein may be reproduced for any purpose whatsoever
without permission of the publisher. Permission may be obtained from Consultants Bureau, A
Division of Plenum Publishing Corporation, 227 West 17th Street, New York, N. Y. 10011, U.S.A.*

CONTENTS (continued)

	RUSS. PAGE	PAGE
On the Determination of Iodine-131—Yu. N. Degtyarev and G. A. Beloslyudova	729	729
Joint Determination of Strontium-90 and Cesium-137—Yu. N. Degtyarev	733	733
Separation of XeO_3 and HIO_3 on Zirconium Phosphate—I. S. Kirin, Yu. K. Gusev, A. N. Mosevich, N. P. Kuznetsov, and V. S. Gusel'nikov	737	736
Electrochemical Method of Purifying a Preparation of NaI with I^{131} (without a Carrier) and of Increasing its Specific Radioactivity—V. E. Kazarinov	740	738
Electrochemical Method of Producing Radioactive Solutions of Iodate without a Carrier —N. A. Balashova and V. E. Kazarinov	742	739
Chemical Changes in the β -Disintegration of RaE Contained in p-Phenethyl Derivatives as a Method of Synthesizing Analogous Polonium Derivatives—V. D. Nefedov, L. M. Gracheva, S. A. Grachev, and L. N. Petrov	744	741
Production of Granulated Zirconyl Phosphate by Freezing and its Ion-Exchange Properties —L. M. Sharygin, A. A. Pospelov, and V. G. Chukhlantsev	747	744
INDEX		
Author Index, Volume 7, 1965	753	
Tables of Contents, Volume 7, 1965	756	

SOVIET JOURNALS AVAILABLE IN COVER-TO-COVER TRANSLATION

This list includes all Russian journals which—to the publisher's knowledge—were available in cover-to-cover translation on June 30, 1965, or for which definite and immediate plans for cover-to-cover translation had been announced by that date. The list reflects only *current* publication arrangements, but the date and issue listed for first publication refer to translations available from any source. Thus, earlier volumes of a translation journal may have been published by an organization other than that listed as the current publisher, and possibly under a different title (and, for *Doklady Akademii Nauk SSSR*, in a different arrangement of sections).

Five bits of information are furnished, separated by bullets:

1. The abbreviation(s) by which the journals are most frequently referred to in Russian bibliographies (if the name of the journal is customarily spelled out, no abbreviation is given).
2. The transliterated full name of the journal.
3. The full name of the translation journal (in bold type).
4. The year, volume (in parentheses), and issue of first publication of the translation (parentheses are empty if the Russian journal does not use volume numbers).
5. The current publisher of the translation [AGI—American Geological Institute, AGU—American Geophysical Union, AIP—American Institute of Physics, CB—Consultants Bureau, CH—Clearing House for Federal Scientific and Technical Information, CS—The Chemical Society (London), FP—Faraday Press, IEEE—Institute of Electrical and Electronic Engineers, ISA—Instrument Society of America, PP—Pergamon Press].

For convenience in locating bibliographic references the journals are listed in alphabetical order of the *abbreviated titles*.

АЭ • Atomnaya énergiya • Soviet Journal of Atomic Energy • 1956(1)1 • CB
Akust. zh. • Akusticheskii zhurnal • Soviet Physics—Acoustics • 1955(1)1 • AIP
Astrofiz. • Astrofizika • Astrophysics • 1965(1)1 • FP
Astron. zh.(urn.) • Astronomicheskii zhurnal • Soviet Astronomy—AJ • 1957(34)1 • AIP
Avtomat. i telemekh. • Avtomatika i telemekhanika • Automation and Remote Control • 1956(27)1 • ISA
Avto(mat). svarka • Avtomaticheskaya svarka • Automatic Welding • 1959(12)1 • British Welding Research Association
Avtometriya • Autometry • 1965(1)1 • CB
Biokhim. • Biokhimiya • Biochemistry • 1956(21)1 • CB
Byul. èksp(erim). biol. (i med.) • Byulleten' èksperimental'noi biologii i meditsiny • Bulletin of Experimental Biology and Medicine • 1959(41)1 • CB
DAN (SSSR) • *see* Doklady AN SSSR
Defektoskopiya • Soviet Defectoscopy • 1965(1)1 • CB
Diff. urav. • Differentsial'nye uravneniya • Differential Equations • 1965(1)1 • FP
Doklady(ady) AN SSSR; DAN (SSSR) • Doklady Akademii Nauk SSSR • The translation of Doklady is published in various journals, according to subject matter. The sections of Doklady contained in each of the translation journals are listed in parentheses.
Doklady Biochemistry (biochemistry) • 1957(112)1 • CB
Doklady Biological Sciences Sections (anatomy, cytology, ecology, embryology, endocrinology, evolutionary morphology, parasitology, physiology, zoology) • 1957(112)1 • CB
Doklady Biophysics (biophysics) • 1957(112)1 • CB
Doklady Botany (botany, phytopathology, plant anatomy, plant ecology, plant embryology, plant physiology, plant morphology) • 1957(112)1 • CB
Doklady Chemical Technology (chemical technology) • 1956(106)1 • CB
Doklady Chemistry (chemistry) • 1956(106)1 • CB
Doklady Earth Sciences Sections (geochemistry, geology, geophysics, hydrogeology, lithology, mineralogy, paleontology, permafrost, petrography) • 1959(124)1 • AGI
Doklady Physical Chemistry (physical chemistry) • 1957(112)1 • CB
Doklady Soil Science (soil science) • 1964(154)1 • Soil Science Society of America
Soviet Mathematics—Doklady (mathematics) • 1960(130)1 • American Mathematical Society
Soviet Oceanography (oceanology) • 1959(124)1 • AGU
Soviet Physics—Doklady (aerodynamics, astronomy, crystallography, cybernetics and control theory, electrical engineering, energetics, fluid mechanics, heat engineering, hydraulics, mathematical physics, mechanics, physics, technical physics, theory of elasticity) • 1956(106)1 • AIP
Elektrokhimiya • Soviet Electrochemistry • 1965(1)1 • CB
Elektrsovyyaz' • combined with Radiotekhnika in Telecommunications and Radio Engineering • 1957(16)1 • IEEE
Elektrotekh. • Elektrotehnika • Soviet Electrical Engineering • 1965 (36)1 • FP
Entomol. oboz(r). • Entomologicheskoe obozrenie • Entomological Review • 1958(37)1 • Entomological Society of America
Fiz. gorenija i vzryva • Fizika gorenija i vzryva • Combustion, Explosion, and Shock Waves • 1965(1) • FP
Fiziologiya rast. • Fiziologiya rastenii • Soviet Plant Physiology • 1957(4)1 • CB
Fiz.-khim. mekh(anika) mater(ialov); FKhMM • Fizikokhimicheskaya mekhanika materialov • Soviet Materials Science • 1965(1)1 • FP
Fiz. met. i metallov.; FMM • Fizika metallov i metallovedenie • Physics of Metals and Metallography • 1957(5)1 • Acta Metallurgica
Fiz.-tekhn. probi. razr. polezn. iskopаем. • Fizikotekhnicheskie problemy razrabotki poleznykh iskopаемых • Soviet Mining Science • 1965(1)1 • CB
Fiz. tverd. tela; FTT • Fizika tverdogo tela • Soviet Physics—Solid State • 1959(1)1 • AIP
FKhMM • *see* Fiz.-khim. mekhanika materialov
FMM • *see* Fiz. met. i metallov.
FTT • *see* Fiz. tverd. tela
Geliotekh. • Geliotekhnika • Applied Solar Energy • 1965(1)1 • FP
Geol. nefti i gaza • Geologiya nefti i gaza • Petroleum Geology • 1958 (2)1 • Petroleum Geology, Box 171, McLean, Va.
Geomagnet. i aéronom. • Geomagnetizm i aéronomiya • Geomagnetism and Aeronomy • 1961(1)1 • AGU
Inzh.-fiz. zh. • Inzhenerno-fizicheskii zhurnal • Journal of Engineering Physics • 1965(8)1 • FP
Inzh. zh. • Inzhenernyi zhurnal • Soviet Engineering Journal • 1965(5)1 • FP
Iksuslav. sputniki Zemli • Iksuslavnye sputniki Zemli • Artificial Earth Satellites • 1958(1)1 • CB (superseded by Kosmich. issled.)
Izmerit. tekhn(ika) • Izmeritel'naya tekhnika • Measurement Techniques • 1958(7)1 • ISA
Izv. AN SSSR, otd.(khim.) n(auk) (or ser. khim.) • Izvestiya Akademii Nauk SSSR: Otdelenie khimicheskikh nauk (or Seriya khimicheskaya) • Bulletin of the Academy of Sciences of the USSR: Division of Chemical Science • 1952(16)1 • CB
Izv. AN SSSR, ser. fiz(ich.) • Izvestiya Akademii Nauk SSSR: Seriya fizicheskaya • Bulletin of the Academy of Sciences of the USSR: Physical Series • 1954(18)3 • Columbia Technical Translations
Izv. AN SSSR, ser. fiz. atm. i okeana • Izvestiya Akademii Nauk SSSR: Seriya fiziki atmosfery i okeana • Izvestiya, Atmospheric and Oceanic Physics • 1965(1)1 • AGU
Izv. AN SSSR, ser. fiz. zemli • Izvestiya Akademii Nauk SSSR: Seriya fiziki zemli • Izvestiya, Physics of the Solid Earth • 1965(1)1 • AGU
Izv. AN SSSR, ser. geofiz. • Izvestiya Akademii Nauk SSSR: Seriya geofizicheskaya • Bulletin of the Academy of Sciences of the USSR: Geophysics Series • 1957(7)1 • AGU (superseded by Izv. AN SSSR, ser. fiz. atm. i okeana and Izv. AN SSSR, ser. fiz. zemli)
Izv. AN SSSR, ser. geol. • Izvestiya Akademii Nauk SSSR: Seriya geologicheskaya • Bulletin of the Academy of Sciences of the USSR: Geologic Series • 1958(23)1 • AGI
Izv. AN SSSR, ser. neorgan. mater. • Izvestiya Akademii Nauk SSSR: Seriya neorganicheskie materialy • Inorganic Materials • 1965(1)1 • CB

